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Retrospective cohort study

Specialist visits (urologist, radiation oncologist, medical oncologist) are strongly associated with treatment received for prostate cancer in the USA

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Commentary on: **Jang TL, Bekelman JE, Liu Y, et al.** Physician visits prior to treatment for clinically localized prostate cancer. *Arch Intern Med* 2010;**170**:440–50.

Little high-quality research has been published regarding the comparative effectiveness of various treatments for prostate cancer,¹ and in the face of this dearth of evidence, practice patterns for localized prostate cancer vary widely across individual practice sites regardless of cancer risk or other measurable patient factors.² Jang and colleagues have completed a timely and important study investigating the associations among the types of physicians seen after diagnosis and ultimate primary treatment selection. Prior studies^{3,4} have examined issues of specialist bias toward their own treatment modality by means of surveys; this is the first to examine the actual impact of specialist visits on ultimate treatment selection.

The authors analyzed data from SEER-Medicare. These data are population based, though representative of only a subset of U.S. geographic regions. SEER data on prostate cancer cases are limited by an absence of PSA data and/or Gleason-grade data in about 40% of cases, and by an outdated classification of Gleason grade which obscures important differences in disease risk. This is an important limitation in that prostate cancer-risk characteristics are strongly associated with treatment selection.² Linking SEER to Medicare restricts the analysis to men aged more than 65, who would be expected to have different treatment patterns on average from younger men.

Despite these limitations, SEER-Medicare is likely one of the best available data sources with which to conduct this type of analysis.

Offering referral to a radiation oncologist has been proposed as a candidate indicator of high-quality prostate cancer care⁵; in this study, just under half the men did in fact see a radiation oncologist. An important, unknown – and likely unknowable – question is the proportion of men who were *offered* referral but declined. As illustrated in Figure 3 in the article, there was wide variation among urologists in terms of likelihood of such a referral. There was marked variation in referral rates by geographic region and across sociodemographic groups. The factors associated with referral to a radiation oncologist, listed in Table 2 in the article, notably do not include higher-risk disease features; indeed, those with Gleason 5-7 tumours were as likely to be referred as those with Gleason 8-10 tumours, and those with PSA 4-10 ng/ml were actually more likely to be referred than those with PSA >10 ng/ml. This observation is significant in light of a recently published study – retrospective but carefully performed – which found a threefold advantage for surgery over external-beam radiation therapy in terms of risks of subsequent metastasis and cancer-specific mortality, with most of the advantage for surgery noted

among men with higher-risk disease.⁶ Nonetheless, other studies have shown that with increasing disease risk, the ratio of radiation to surgery rises rapidly.²

Table 3 in the paper presents the core findings of this analysis, which paint a quite unflattering picture with respect to clinician objectivity in counselling men with localized prostate cancer. Among men who see only a urologist, 34% receive prostatectomy, 34% expectant management and 27% hormonal monotherapy (a treatment alternative not supported by evidence in the setting of localized disease⁷); only 5% receive radiation therapy. Among those seeing a radiation oncologist as well as a urologist, the likelihood of receiving radiation rose more than 16-fold, to 83%, at the expense of all other options. Additional consultation with a medical oncologist shifted the distribution only slightly.

Of course most men receiving radiation therapy will see a radiation oncologist first, so these data do not indicate a causal relationship between consultation and treatment. It would have been useful to include a multivariable analysis of predictors of actually receiving radiation – adjusting for the individual urologist and radiation oncologist seen as well as clinical and sociodemographic factors. What is particularly disturbing, however, is that use of expectant management even among men aged 80 or older fell from 45.3% among those seeing only a urologist, to 8.2% among those also seeing a radiation oncologist in addition to urologist. Given that most men in SEER have low-risk disease characteristics,⁸ this trend indicates pervasive overtreatment, worsened in particular by consultation with radiation oncologists. Conversely, though relatively few men saw primary care providers between diagnosis and treatment, as indicated in Table 5 in the article, those who did were much more likely to be followed expectantly, less likely to receive prostatectomy and much less likely to receive radiation therapy.

The commentary accompanying this article argues that it is the urologists who are to be held responsible for the observed variance in treatment. In fact there is no way to determine from SEER-Medicare data the reasons for the patterns observed – selective referrals by urolo-

gists and biased counselling by both sets of specialists likely play important roles. What is clear from this analysis are three critical needs for improved prostate cancer management: (1) better collection and dissemination to patients of unbiased, risk-adjusted prostate cancer outcomes data to facilitate more objective decision making; (2) more involvement of well-informed primary care physicians who can help their low-risk-disease patients avoid overtreatment; and (3) a greater commitment by all specialists treating prostate cancer to planning and executing randomized clinical trials to help fill the void of high-quality comparative effectiveness data currently facing men selecting prostate cancer treatments.

Competing interests None.

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